

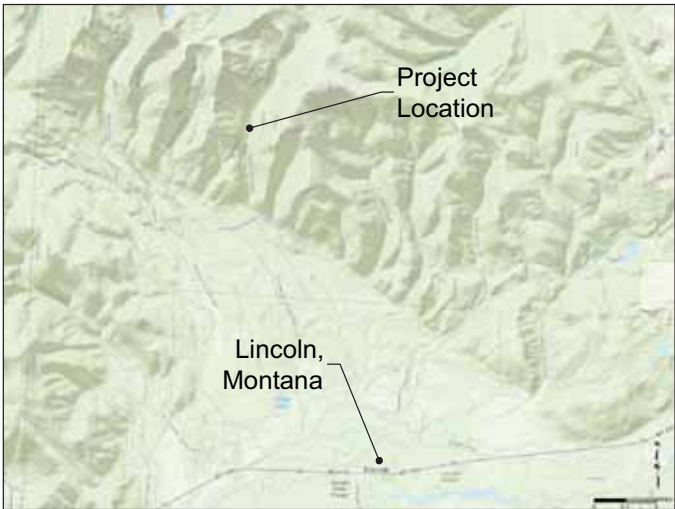
STONEWALL CREEK CHANNEL & FLOODPLAIN RESTORATION

LOCATED IN SECTION 27, TOWNSHIP 15N, RANGE 9W
LATITUDE = 47.0244 NORTH; LONGITUDE = 112.7232 WEST
LEWIS AND CLARK COUNTY, MONTANA
COOPERATING PARTNERS: BIG BLACKFOOT CHAPTER TROUT UNLIMITED AND US FOREST SERVICE

JUNE, 2013



AERIAL VICINITY MAP
Scale: 1" = 500'



VICINITY MAP

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ERM - WEST, INC.
PO Box 582
#1 North Street Island Dr.
Livingston, MT 59047
(406) 222 7600

DATE: 6-21-2013
PROJECT #: 0179686
PROJECT ENG.: TC
DRAWN: TC
CHKD: DD

REVISION NO.	REVISION DESCRIPTION	DRAWN BY	REVISION DATE

VICINITY MAP AND SHEET INDEX

STONEWALL CREEK RESTORATION
LINCOLN, MT

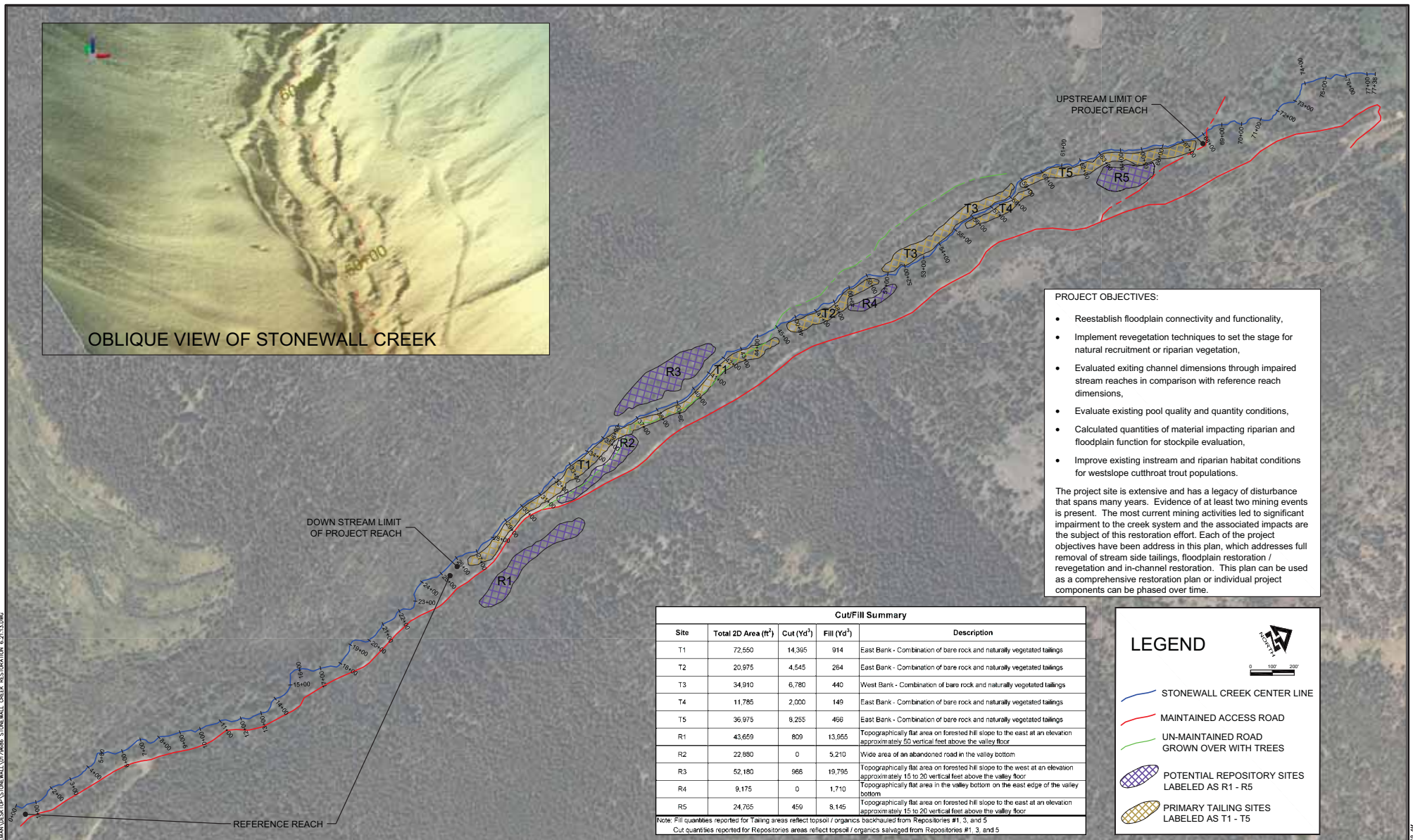
SHEET

C1

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OBLIQUE VIEW OF STONEWALL CREEK



PROJECT OBJECTIVES:

- Reestablish floodplain connectivity and functionality,
- Implement revegetation techniques to set the stage for natural recruitment or riparian vegetation,
- Evaluated exiting channel dimensions through impaired stream reaches in comparison with reference reach dimensions,
- Evaluate existing pool quality and quantity conditions,
- Calculated quantities of material impacting riparian and floodplain function for stockpile evaluation,
- Improve existing instream and riparian habitat conditions for westslope cutthroat trout populations.

The project site is extensive and has a legacy of disturbance that spans many years. Evidence of at least two mining events is present. The most current mining activities led to significant impairment to the creek system and the associated impacts are the subject of this restoration effort. Each of the project objectives have been address in this plan, which addresses full removal of stream side tailings, floodplain restoration / revegetation and in-channel restoration. This plan can be used as a comprehensive restoration plan or individual project components can be phased over time.

Cut/Fill Summary				
Site	Total 2D Area (ft ²)	Cut (Yd ³)	Fill (Yd ³)	Description
T1	72,550	14,365	914	East Bank - Combination of bare rock and naturally vegetated tailings
T2	20,975	4,545	264	East Bank - Combination of bare rock and naturally vegetated tailings
T3	34,910	6,780	440	West Bank - Combination of bare rock and naturally vegetated tailings
T4	11,785	2,000	149	East Bank - Combination of bare rock and naturally vegetated tailings
T5	36,975	8,255	466	East Bank - Combination of bare rock and naturally vegetated tailings
R1	43,659	809	13,855	Topographically flat area on forested hill slope to the east at an elevation approximately 15 to 20 vertical feet above the valley floor
R2	22,880	0	5,210	Wide area of an abandoned road in the valley bottom
R3	52,180	966	19,795	Topographically flat area on forested hill slope to the west at an elevation approximately 15 to 20 vertical feet above the valley floor
R4	9,175	0	1,710	Topographically flat area in the valley bottom on the east edge of the valley bottom
R5	24,765	459	9,145	Topographically flat area on forested hill slope to the east at an elevation approximately 15 to 20 vertical feet above the valley floor

Note: Fill quantities reported for Tailing areas reflect topsoil / organics backhaired from Repositories #1, 3, and 5
Cut quantities reported for Repositories areas reflect topsoil / organics salvaged from Repositories #1, 3, and 5

LEGEND

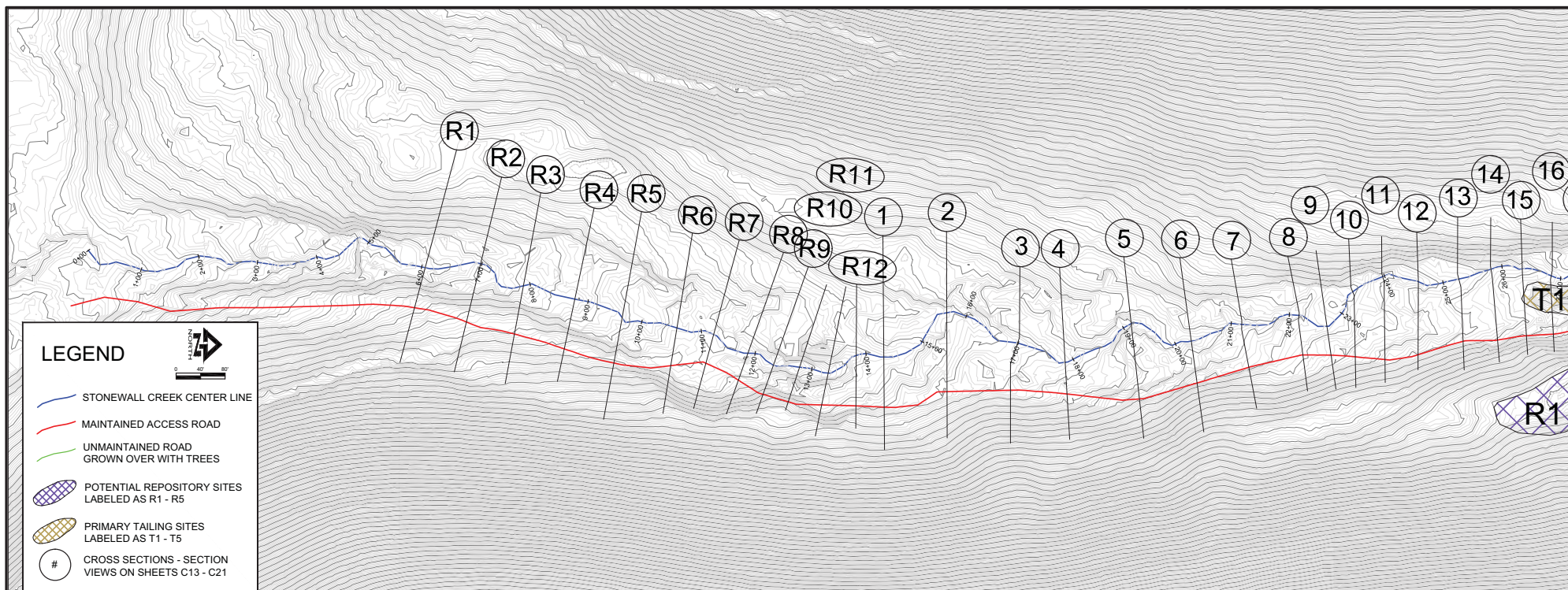
STONEWALL CREEK CENTER LINE

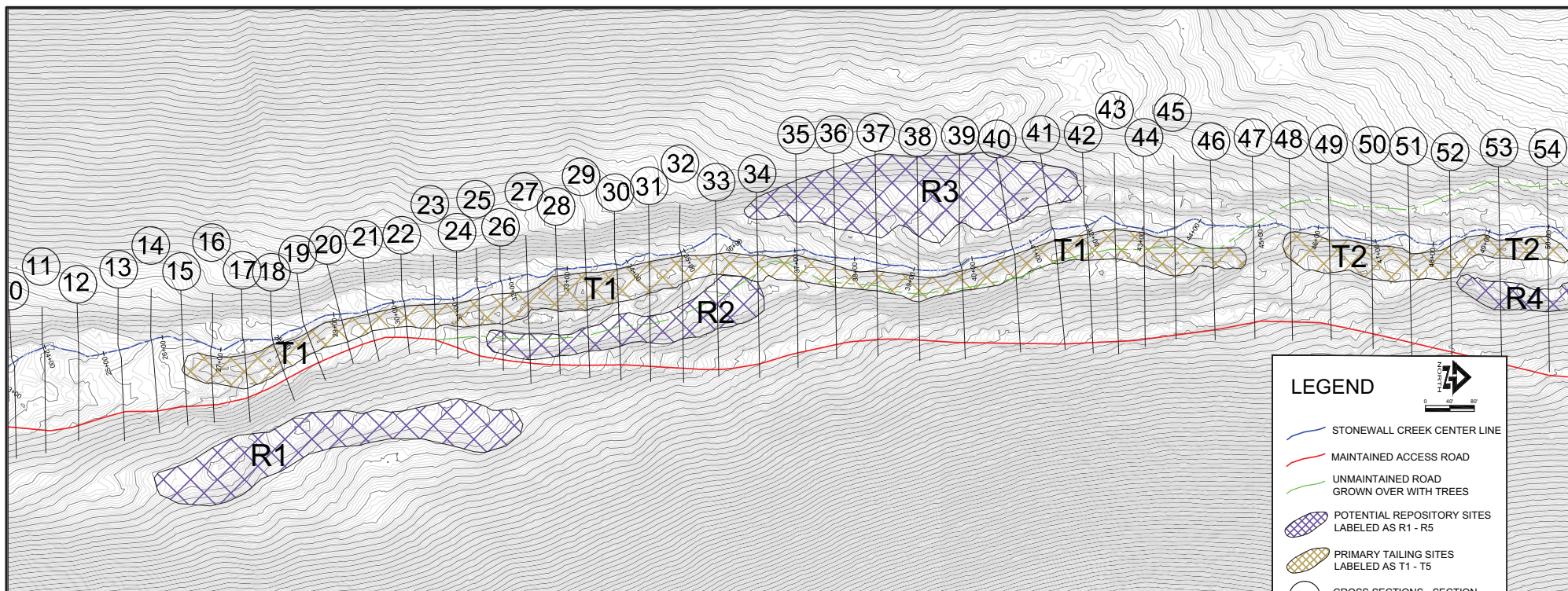
MAINTAINED ACCESS ROAD

UN-MAINTAINED ROAD GROWN OVER WITH TREES

POTENTIAL REPOSITORY SITES LABELED AS R1 - R5

PRIMARY TAILING SITES LABELED AS T1 - T5





LEGEND

STONEWALL CREEK CENTER LINE

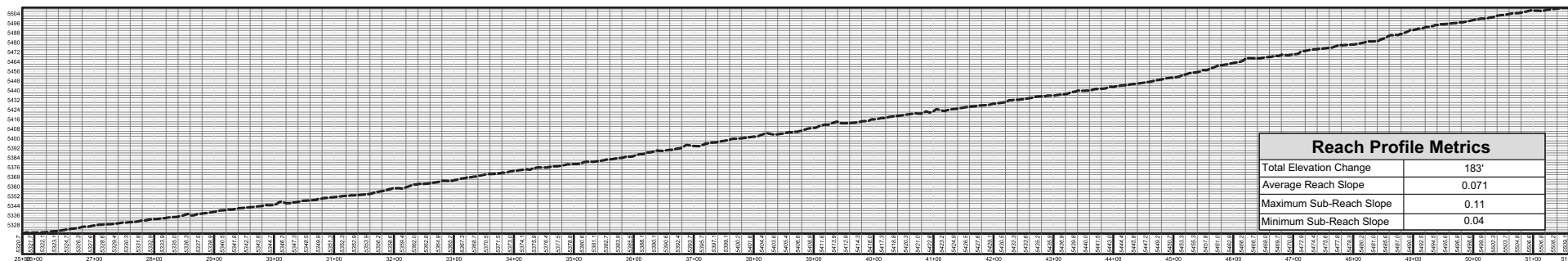
MAINTAINED ACCESS ROAD

UNMAINTAINED ROAD GROWN OVER WITH TREES

POTENTIAL REPOSITORY SITES LABELED AS R1 - R5

PRIMARY TAILING SITES LABELED AS T1 - T5

CROSS SECTIONS - SECTION VIEWS ON SHEETS C13 - C21



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PLAN & PROFILE 25+00 TO 51+00

STONEWALL CREEK RESTORATION
LINCOLN, MT

SHEET
C4